- 9 -

Remarks

The present amendment is responsive to the Office Action mailed in the above-referenced case on January 11, 2006. Claims 1-32 are pending. Applicant acknowledges an election made on December 09, 2005 by Donald R. Boys in response to an indicated restriction, electing Group 1 for continued prosecution, claims 1-32 drawn to a system for providing network security.

In the Office Action the Examiner objects to claim 1 for informalities. Claim 32 is rejected under 35 U.S.C. 112, first paragraph as failing to comply with the enabling requirement. Claims 1-10, 12, 17-25 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Jacobson et al. (US 6044402) hereinafter Jacobson. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobson in view of Vaidya (US 6279113) hereinafter Vaidya. Claims 14-16, 26 and 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobson in view of Joiner (US 6742128) hereinafter Joiner. Claims 14, 26 and 28 are further rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobson in view Caronni (US 2002/0143850) hereinafter Caronni. Claims 15, 16 and 30 are further rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobson in view of Caronni and further in view of Teixeira (US 2005/0005145) hereinafter Teixeira. Claims 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobson in view of Joiner and further in view of Weaver (US 6574669) hereinafter Weaver.

In response to the Examiner's rejections and comments applicant herein amends the claims to more particularly recite that the data is checked and hashed in real-time over live data connections and to add the checksum sliding window operation creating hash values in the process and the algorithm used in the calculation. Claim 32 was amended to overcome the 112 rejection which is also facilitated by the amendments to the independent claims. Claims 14 and 23 are herein canceled.

The Examiner presents the art of Jacobson to read on applicant's original claim 1.

- 10 -

The Examiner relies upon Joiner to teach additional functionality of a third software portion for detecting virus activity by hashing data passed over the connection in real time and for comparing the hash data to a dataset containing virus signatures, the dataset searchable by hash table index, the hash entries therein derived individually from separate virus signatures. The above limitations were part of original claim 14.

Applicant herein amends claim 1 to positively recite that the data connections are live and the sliding window determines hash values from the data in the connections in real time. Applicant argues that Joiner and Jacobson, either singly or in combination, fail to positively recite that data passing through live connections are monitored and hashed in real time.

Joiner teaches that data is gathered from various network sources and stored. Then operations are performed on the stored data to determine connections and virus threats (col. 6, line 65 to col. 7, line 6; col. 7 lines 29-37; col. 8 lines 47-54). Applicant argues that the combination of Jacobson and Joiner fail to accomplish applicant's invention as claimed because live, real time data hashing is not possible. Applicant argues that only by utilizing applicant's unique sliding window method of determining hash values from live data streams can real time virus threats be determined.

Applicant believes claim 1, as amended is clearly patentable over Jacobson and Joiner. Claims 2-13 and 15-16 are patentable based on their own merits or at least as depended upon a patentable claim.

Specifically regarding dependent claim 15 applicant amends the claim to particularly point out the detailed method used in the sliding window wherein a first hash value computed from a set number of consecutive bytes in the window, compared to the hash table index and stored, a second hash value is then computed and compared to the hash table index when the window slides to the next consecutive byte in the data string, wherein the second hash value equals the first hash value minus the byte exiting the window plus the next consecutive byte of the data sting entering the window, thereby creating a high speed search algorithm for the connection.

- 11 -

Applicant directs the Examiner's attention to figure 11A of applicant's specification illustrating a hashing operation on a data stream according to a simplest embodiment of the present invention. A hash value 1 labeled (HV1) is illustrated in this example and represents a hash value computed from the first 9 bytes of the data string using a single sliding checksum window of a length equal to 9 bytes. HV1 is then immediately compared against the previously described hash table entry. As soon as HV1 exists, a hash value 2 is computed the window sliding one consecutive byte over. HV1 is temporarily stored when computed and then recalled to expedite computation of the second hash value as follows:

Value (h2) = value (h1) – the first byte value (reversed checksum of the first byte of the last value) + the next consecutive byte value of the data string. The portion then of HV1 that does not have to be recomputed is shaded black in this example. The use of this technique expedites hashing because relevant bytes from the previous hash value are not recomputed. A next consecutive window HV 3 is illustrated in this example for creating the third hash value sliding one consecutive byte over from HV2.

Regarding claim 17, applicant herein amends the claim to include limitation from depended claim 23 wherein the pre-defined state or states includes one, more, or a combination of a banned Universal Resource Locator; a banned domain name; a detected virus signature; a banned port; and banned data content defined by filter. Applicant argues that Jacobson fails to teach said limitation. Jacobson is limited to blocking the connection based on the network address of the node (col. 17 lines 60-67).

Applicant believes claim 17, as amended, is patentable over the art of Jacobson. Claims 18-22 and 24-32 are patentable on their own merits, or at least as depended from a patentable claim.

As all of applicant's claims are patentable over the prior art, applicant respectfully requests that the rejections be withdrawn and that the case be passed quickly to issue.

- 12 -

If any fees are due beyond fees paid with this amendment, authorization is made to deduct those fees from deposit account 50-0534. If any time extension is needed beyond any extension requested with this amendment, such extension is hereby requested.

Respectfully Submitted,
John Alexander Bartas

By /Donald R Boys/
Donald R. Boys
Reg. No. 35,074

Central Coast Patent Agency
P.O. Box 187
Aromas, CA 95004
(831) 726-1457